

H2 Economics Chapter 1 Notes

This document is intended as a summary of the points provided in the NJC 2023 H2 Economics Chapter 1 Seminar Notes. It is to be used as a **study guide** to provide a **structure** for studying the Chapter 1 Notes.

1 The Central Economic Problem

In our society, there is a fundamental problem. While all of us wish to maximise our satisfaction, which we can achieve by consuming goods and services, there are scarce resources. Hence, some of our needs and wants cannot be satisfied. This is the problem of scarcity, in short.

Scarcity is defined as the excess of unlimited wants over limited resources to produce goods and services to satisfy these wants.

Wants are all the goods and services that consumers would purchase in order to increase their satisfaction, if they had unlimited income.

Resources are inputs which can be used to produce goods and services, which consists of capital, entrepreneurship, land and labour.

Land refers to resources supplied by nature.

Labour refers to the resource of human effort, both physical and mental, which are directed to the production of goods and services.

Capital refers to man-made resources that can be used in the production of other goods and services rather than being consumed for their own sake.

Entrepreneurship is a human resource which is separate from labour, referring to managerial ability that involves the organising of factors of production. Entrepreneurs are rewarded in the forms of profits by taking risks related to the production of goods and services.

Opportunity cost is the value of the next best alternative forgone when a choice is made.

Scarcity exists as there is an excess of unlimited wants over limited resources to produce goods and services to satisfy these wants. Since the inputs needed to produce goods and services are limited, it is impossible to produce all the goods and services consumers would buy to increase their satisfaction if they had unlimited income. This is known as the central economic problem of scarcity. Hence, a choice has to be made regarding the production of goods and services and the allocation of resources to production to obtain the highest level of societal welfare from the available resources. A decision must be made for which goods and services to produce and how much of each good and service to produce. A decision must also be made for the methods of production. Thereafter, a decision must be made for the distribution of the produced output. In selecting among alternatives, one chooses to produce one good over another good, and must forgo the other good which the resources could have been used to produce, resulting in opportunity cost¹.

Scarcity Necessitates Choice, and Choice Involves Opportunity Cost

An Exercise in Identifying Resources

What is the difference between labour and entrepreneurship?

Labour refers to human effort — physical and mental in the general sense. Entrepreneurship specifically refers to the act of managing a firm's decisions. It is not ownership per se, but rather the people who make the firm's decisions.

What type of resource would reclaimed land be considered as?

It depends on what its primary purpose is. If used primarily for agriculture, recreation, or habitat restoration, it aligns more closely with the traditional economic definition of land. If developed for urbanisation, industrial purposes, or infrastructure projects, it may be considered as capital due to its role in enhancing economic productivity.

What is the difference between financial capital and physical capital

Financial capital cannot be used to produce resources directly and hence is not a resource at all. Instead, it can be used to exchange resources. Physical capital can be used in the production of resources directly.

¹ In writing this point, you should include a graphical explanation using a production possibility curve (PPC), which will be covered in Section 3.

2 Rational Decision Making

In Economics, a rational decision is one which maximises the self-interest of the economic agent. A choice is in the economic agent's self-interest if he thinks that the choice made is the best one available. Thus, rational decision makers, in the pursuit of their self-interest, determine what and how much goods and services are produced, how these goods and services are produced, and the incomes of the different factors of production that produce them, allowing society's scarce resources to be allocated efficiently.

Marginal Benefit refers to the additional benefit gained from consuming or producing one more unit of the good/service.

Marginal Cost refers to the additional cost incurred from consuming or producing one more unit of the good/service.

Before making a decision, economic agents weigh the costs and benefits of an activity in order to maximise their self-interest. If the marginal benefit exceeds the marginal cost, it is rational to do more of the activity. If the marginal cost exceeds the marginal benefit, it is rational to do less of the activity. The adjustment process will reach equilibrium the moment marginal benefit equals marginal cost. This principle applies to consumers, firms and governments alike.

The Three Step Approach

1a. In the free market, rational consumers aim to maximise their utility, which refers to the benefit or satisfaction consumers receive when they consume a good or service, subject to their budget constraint. They do this by considering their private costs and benefits.

OR

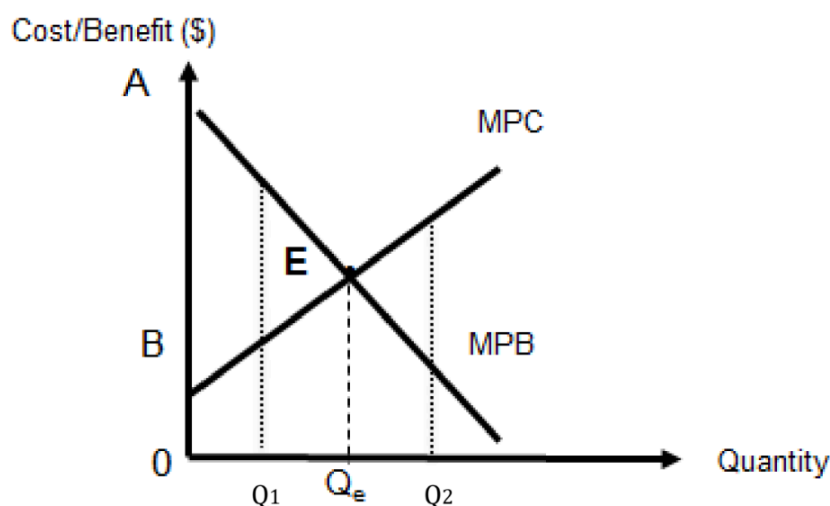
1b. In the free market, rational firms aim to maximise profits, which is the difference between total revenue from selling goods or services and the total cost of producing them. They do this by considering their private costs and benefits.

OR

1c. Governments aim to maximise societal welfare, subject to the government budget constraint. They do this by considering their private costs and benefits.

2. For a (economic agent), Marginal Private Benefit (MPB), is (example of MPB)² while Marginal Private Cost (MPC), is (example of MPC).

3. As long as MPB is greater than marginal private cost MPC from the consumption/ production of an additional unit of goods or service, the (economic agent) will increase consumption/ production from Q_1 to Q_e . If the MPC is greater than the MPB from the consumption/ production of an additional unit of goods or service, the (economic agent) will decrease consumption/ production from Q_2 to Q_e . Hence the (economic agent) will consume/ produce up to the unit Q_e where $MPB = MPC$ where (aim) is maximised.



How to Approach Decision Making Questions

In a decision-making type of question, the structure is typically one body paragraph for well explained costs and another body paragraph for two well explained benefits, coupled with one paragraph on constraints OR unintended consequences, then, a final paragraph weighing the costs and benefits to arrive at a final conclusion, by considering one of three things³.

1. The **constraints** economic agents are operating within.
2. The **information** needed and **different perspectives** of the issue.
3. The **intended consequences** and **unintended consequences** on other economic agents.

Decisions made by economic agents at the national level can have an impact at the international level.

² The example provided must be related to the aim of the economic agent and contextualised.

³ If the decision is made by consumers or firms, consideration 1 is typically used. If the decision is made by the government, 2 and 3 are more likely to be used. Of course, this is just a general rule and valid weighing using considerations outside of these 3 is perfectly acceptable.

3 The Concept of Efficiency

The allocation of scarce resources among competing wants requires societies to decide what and how much to produce, how to produce and for whom to produce. The objective of maximising the level of satisfaction involves the attainment of efficiency.

Economic Efficiency is a situation where each good is produced at the minimum cost and where individual people and firms get the maximum benefit from their resources.

Productive Efficiency is achieved when the firms in an economy are producing the maximum output for the given amount of inputs, or producing a given output with the least cost combination of inputs. The economy achieves productive efficiency when all the available resources are fully employed to achieve the maximum output possible.

Allocative Efficiency is achieved when the current combination of goods and services produced and consumed allows the society to attain the greatest level of satisfaction. A condition required for allocative efficiency is $P = MC$.

Why does $P = MC$ for allocative efficiency?⁴

When the value consumers place on a good — the price offered for the last unit of a good — equals the cost of the resources used up in production of that unit of good — the additional costs incurred in its production. If the price consumers are willing to pay is greater than the marginal cost of producing an additional unit, it means that social welfare will still increase with the production of the additional unit. If the price consumers are willing to pay is less than the marginal cost of producing an additional unit of the good, it means that too many resources have been allocated to that good and society's welfare will increase by reducing the output of that good. Hence when $P = MC$ is satisfied, total economic welfare is maximised.

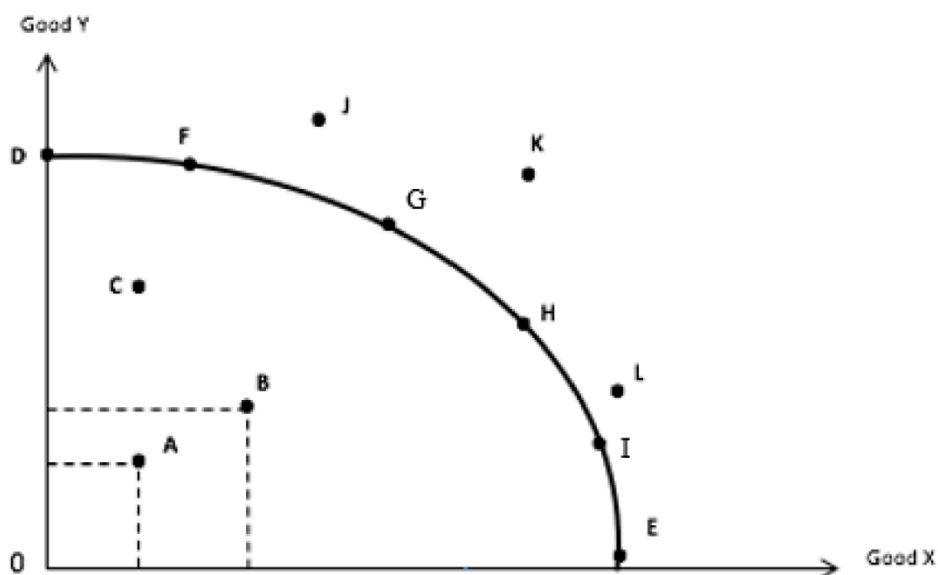
Why is allocative efficiency only achieved after productive efficiency is achieved?

In order for allocative efficiency to be achieved, societal welfare must be maximised. Hence, there must be maximum satisfaction of wants and needs, implying the consumption of a maximum amount of goods and services, implying the need to produce at a maximum output with a given amount of input first.

⁴ This concept is better understood using concepts taught in Chapter 3.

The Production Possibilities Curve (PPC)

The PPC is a useful tool when explaining the concepts of scarcity, choice and opportunity cost. In addition, the PPC can be used to help students better understand the benefits of international trade in Chapter 15. A PPC diagram is shown below:



The ***Production Possibility Curve (PPC)*** shows the maximum attainable combinations of two goods and services that can be produced in an economy, when all the available resources are used fully and efficiently, at a given state of technology, within a specified time period.

Productive Capacity is the maximum level of output that the economy is able to produce at when all resources are fully and efficiently employed.

Productive and Allocative Efficiency Illustrated

Productive efficiency is illustrated by production points D, E, F, G, H and I, where all the available resources are fully employed to achieve the maximum output possible. Allocative efficiency is illustrated by one of the points along the PPC. Different combinations of goods along the PPC would yield different levels of satisfaction, depending on the tastes and preferences of the society. The production point that achieves allocative efficiency for the society is the combination of goods and services which maximises its welfare. It is possible that different societies may have different allocative efficient points. A society's allocative efficient production point may also change over time, as taste and preferences change or as distribution of income changes.

The Central Economic Problem Illustrated

The central problem of scarcity arises because unlimited wants exceed the limited resources available to produce goods and services. With limited inputs, it is impossible to produce all goods and services that consumers would buy with unlimited income. This is illustrated by unattainable combinations outside the PPC, like points J, K, and L. The economy can only produce combinations within or on the PPC, necessitating choices about the types and quantities of goods and services to produce, the production methods, and the distribution of output so as to maximise societal welfare. Choosing to produce one good over the next best alternative involves opportunity cost, as illustrated by a movement on the PPC from point F to point I, where an increase in good X from Q_{x1} to Q_{x2} necessitates forgoing production of good Y so its output decreases from Q_{y1} to Q_{y2} .

Increasing Opportunity Cost Illustrated

The PPC is concave to the origin (not just 'concave'). This means that for every additional unit of a good produced, larger and larger quantities of the alternative good must be sacrificed. This is because the resources in the economy are usually not perfectly suitable for the production of both goods. As the economy concentrates on the production of one good, it has to start using resources that are less and less suitable – resources that would have been better at producing other goods. To produce an additional unit of a good means having to move increasingly greater amounts of resources from the alternative good, and hence, the greater the amount of alternative good that has to be sacrificed.

Links to Macroeconomics

Unemployment and Underemployment Points inside the PPC (for example, points A, B and C) are inefficient because resources are either unemployed or underemployed – the economy is not producing the maximum output possible with the given resources.

- Unemployment is the situation in which not all the available resources are used in the production of goods and services ie. some resources are not utilised at all.
- Underemployment refers to the case in which resources are engaged in production but are operating below their potential capacity i.e. the resources are not efficiently utilised. At point B, it is possible to use the unemployed and underemployed resources to increase the production of one good without decreasing the production of the other good, that is, opportunity cost incurred is zero (for example, movement from point B to G).

Actual economic growth is related to the concept of short-run growth, and is measured by the percentage annual change in national output actually produced. On the PPC diagram, it can be illustrated by an outward movement from a production point within the PPC to a production point closer to or on the PPC. As long as there is an increase in one good without the fall in the other, it can be considered actual economic growth.

Potential economic growth, otherwise known as long-run economic growth, is defined as an increase in the productive capacity of the economy. It is illustrated by an outward shift of the PPC. The main sources of long run economic growth are:

- Increases in the quantity resources
- Increases in the quantity of resources or Technological advancement

Cause	Key Analysis/Technical Terms
Quantity of Resources	An increase in the quantity of (resource) results in an increase in the amount of (resource) which can be producing output simultaneously. Hence, there is an increase in the ability of the economy to produce.
Quality of Resource & Technological Advancements	Technology consists of tools, machines and materials, as well as plans and procedures that aid in the production of goods and services. Technological advancements and improvements in the quality of resources can lead to new and better methods of producing goods. Hence, there is a smaller number of resources that need to be used to produce the same level of output. Hence, there is an increase in the ability of the economy to produce.

Parallel Shifts in the PPC

If the resource whose availability is altered is perfectly adaptable to the production of both goods, the increase in productive capacity is illustrated by a parallel outward shift in PPC.

Skewed Shifts in the PPC

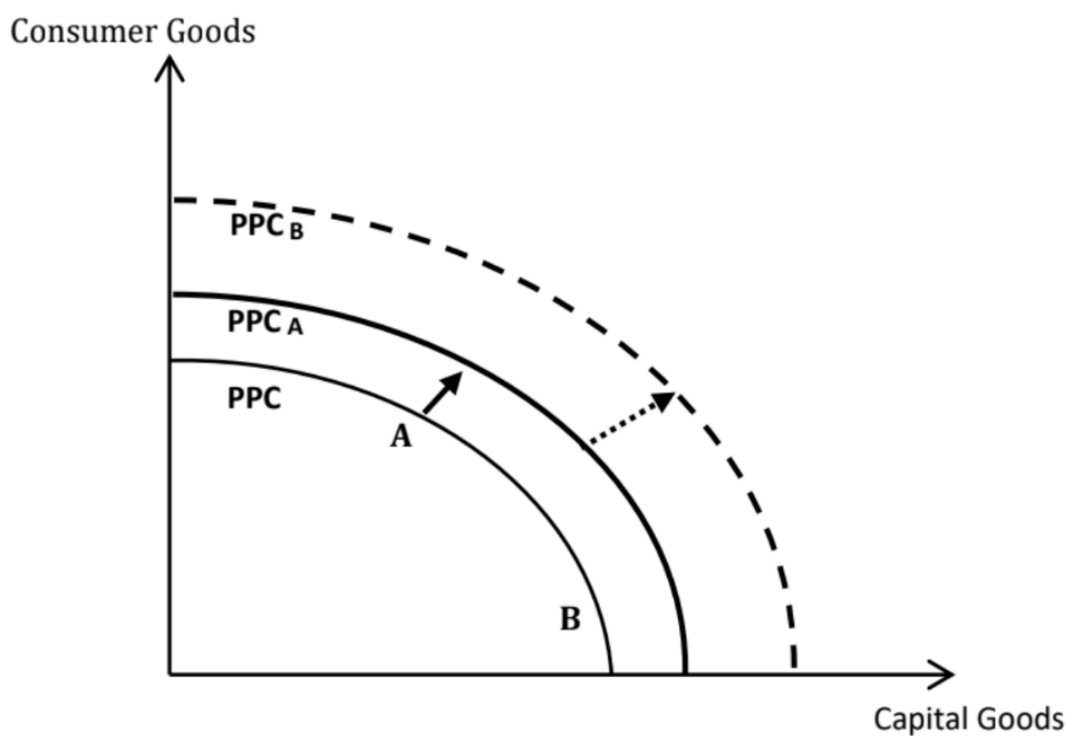
Production of oil-intensive goods and services would be more affected by the destruction of Saudi's oil processing facilities than non-oil intensive goods and services. The contraction in Saudi's productive capacity can be illustrated by a skewed inward shift of Saudi's PPC.

Important Things to Note

1. Graph axes must be labelled using concrete goods (not just 'Good X' and 'Good Y').
2. Link to productive capacity, as well as its definition, especially in PPC analysis.
3. The PPC curve must be in contact with the axes.
4. The Direction (outward/inward) and magnitude (parallel/skewed) of the shift in PPC must be mentioned.
5. For most cases, a good on the graph axes should have a value which is the opportunity cost of the other good. For example, if the question gives you that oil processing facilities are destroyed, naturally, since oil processing facilities are used to produce oil-intensive goods, the opportunity cost of producing oil-intensive goods must be non-oil intensive goods. This allows you to make a more in-depth 'skewed shift' analysis.

A Note on Capital Goods

Since capital goods are goods used in the production of other goods and services, the more capital goods an economy produces in one period, the more output it will be able to produce in the next period. To produce more capital goods in this period, an economy must reduce present consumption. An economy typically must decide between producing goods for current consumption and producing goods for future consumption.



If the economy chooses to produce more consumer goods at point A as compared to point B, it will experience a relatively smaller increase in its productive capacity. This is illustrated by the shift of the PPC from PPC to PPC_A , the economy's choice to produce more consumer goods means a higher level of consumption in the current time period. If the economy chooses to produce more capital goods at point B, it will experience a relatively greater increase in its productive capacity, as illustrated by the shift of the PPC from PPC to PPC_B . This allocation of resources to the production of more capital goods in the current time period can increase the level of future consumption, by sacrificing a certain amount of current consumption.

4 Positive and Normative Statements

Economics is a social science which necessarily involves analysis and evaluation. However, it is extremely important to separate them, because Cambridge is assessing us on our ability to analyse objectively, such that we can form a justified opinion, rather than an opinion based on biases. Hence, we must learn the difference between positive and normative statements.

Positive Statements describe and explain economic facts and events observed objectively. They are in principle, capable of being refuted.

Normative Statements evaluate the causes and impacts of economic behaviour and questions if they are good or bad. It is a subjective opinion that cannot be proved or disproved by an appeal to facts.

Suppose you saw a man kill another man and you were asked to provide eyewitness testimony for the cause of the man's death, objectively.

A normative statement would be "The bastard shot the victim with a gun in cold blood! He needs to be sentenced to death!" You are assuming the killer was an unscrupulous person. While that may be a valid inference from what you saw, it is an inference nonetheless, which inherently includes an opinion. A positive statement would be "The accused shot the man in the chest at 9pm. His face was emotionless while he was doing it." The statement is more factual and objective. These details cannot be argued against when provided with the evidence as they are observed in the same way by every person.